

REMARKS

Summary Of The Office Action & Formalities

Claims 1-23 are all the claims pending in the application. By this Amendment, Applicants are amending claims 3 and 6. No new matter is added.

The prior art rejections are summarized as follows:

1. Claims 1-3, 5, 6, 8, 11, 14, 15 and 18-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kar, et al. (USP 4,531,959).

2. Claims 4 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kar, et al. (USP 4,531,959).

Applicants respectfully traverse.

Claim Rejections - 35 U.S.C. § 103

1. Claims 1-3, 5, 6, 8, 11, 14, 15 and 18-21 In View Of Kar, et al.

In rejecting claims 1-3, 5, 6, 8, 11, 14, 15 and 18-21 in view of Kar, et al., the grounds of rejection state that

Kar, et al. teaches the design on optical fiber coating apparatus as shown in Fig. 6. Kar, et al. teaches his apparatus is comprised of an integral die support or receiver or downstream part and grid for applying coating to the fiber. Kar, et al. shows the die support or receiver or downstream part for receiving the exit die and the exit die and grid together define a passageway for the optical fiber. Kar, et al. teaches the die support and grid are integral to facilitate precise alignment of the longitudinal axis of the grid and the exit die. Kar, et al. fails to teach the integral grid and die support includes a die support for the entry die or upstream part. However, it would have been obvious to modify the Kar et al apparatus by extending sleeve 63 in a direction upstream of the

grid or provide an upstream part to receive the entry die to facilitate alignment of the longitudinal axis of the guide die or entry die with the aligned longitudinal axis of the grid and exit die for obvious reason to expect similar benefits taught by Kar et al for making integral the grid and the die support/downstream part/receiver for the exit die -facilitate maintenance by eliminating time spent for aligning the dies, both exit and entry, the grid. This claim 1 is obvious over Kar et al.

With respect to claim 11, the same rejection applied to claim I is applied here. Kar et al shows a support/housing for the device for applying coating onto the optical fiber comprising a means for feeding coating around the grid. With claim 14, the same rejection applied to claim 1 is applied here. The recitation that the grid has through-holds that open into a common annular space surrounding the grid does not further limit applicant's invention over Kar et al since Kar et al shows in his figure that there is a space surrounding the grid into which coating is fed.

Office Action at pages 2-4.

Applicants traversed the previous prior art rejection in view of Kar et al. by amending the claims to recite that the grid is an integral one-piece construction with the die support (claims 1 and 11), receivers (claim 14), and upstream/downstream parts (claim 18). Applicants noted that Fig. 2 of Kar et al. fails to teach or suggest this structure. See Amendment of January 9, 2003.

In rejecting claims 1, 11, 14, and 18, the grounds of rejection now rely on the embodiment shown in Fig. 6 of Kar et al., which has "a sleeve 63, the lower end of which is extended," and "[s]izing die 64 [which] is located in the lower end of the sleeve 63 which is free from holes." Kar et al. at column 6, lines 21-23. The grounds of rejection correctly acknowledge that Kar et al. fails to disclose the entry die support and grid as a one-piece integral

construction. Nevertheless, the grounds of rejection argue that extending the sleeve 63 to form this structure would have been obvious in order to facilitate alignment. Applicants respectfully disagree.

The Federal Circuit has reminded us that the USPTO is held to a rigorous standard when trying to show that an invention would have been obvious in view of the combination of two or more references or a combination (or modification) of separate disclosures within a single reference. See, In Lee, USPQ2d 1430, 1433 (Fed. Cir. 2002), citing, e.g., In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) (“Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.”).

The Federal Circuit goes on to emphasize that the “need for specificity pervades this authority.” In re Lee at 1433 (emphasis added) (citing In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (“particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed” (emphasis added))).

Applicants respectfully submit that the current grounds of rejection do not satisfy the Federal Circuit’s rigorous standard for demonstrating that the claimed invention would have been obvious in view of Kar et al.

In the present Office Action, the grounds of rejection mistakenly conclude that “it would have been obvious to modify the Kar et al apparatus by extending sleeve 63 in a direction upstream of the grid or provide an upstream part to receive the entry die to facilitate alignment of the longitudinal axis of the guide die or entry die with the aligned longitudinal axis of the grid and exit die for obvious reason to expect similar benefits taught by Kar et al for making integral the grid and the die support/downstream part/receiver for the exit die -facilitate maintenance by eliminating time spent for aligning the dies, both exit and entry, the grid.” Office Action at page 3. This is clearly not the case.

Referring to Fig. 6, Kar et al. states:

The embodiment of FIG. 6 employ[s] a sleeve 63, the lower end of which is extended. Sizing die [38] is located in the lower end of sleeve 63 which is free from holes. Location of sizing die 38 within the flow distribution sleeve facilitates the precise alignment of their longitudinal axes. It may even be possible to fabricate the sizing die and flow distribution sleeve as a unitary structure. However, cleaning techniques would have to be developed for any of these embodiments. It is noted that the embodiment of FIG. 2 can be easily cleaned since it is readily disassembled.

Kar et al. at column 6, lines 21-32 (emphasis added). First, the embodiment of Fig. 6 and corresponding discussion concerns the sizing die 38 at the downstream end of the flow distribution sleeve 63. The reference is otherwise silent as to the guide die 42 at the upstream side of the flow distribution sleeve being disposed anywhere but outside the flow distribution sleeve. Indeed, contrary to the Examiner’s position, one skilled in the art would not have

thought to extend the sleeve at the upstream end and place the guide die 42 therein. In each of the embodiments that illustrates the guide die, the guide die is positioned outside the flow distribution sleeve. There is absolutely no basis disclosed in the applied art for reconfiguring the apparatus as argued in the grounds of rejection. Absent Applicants' disclosure, one skilled in the art would not have thought to reconfigure the structure as alleged.

Moreover, Kar et al. would have discouraged (i.e., taught away from) placing the guide die within the flow distribution sleeve, since the reference notes that it is preferable to have the components readily disassembled. Placing the guide die within the sleeve would only serve to complicate its disassembly and make the resulting device very difficult to clean. For this reason, Kar et al. identifies Fig. 2 as the preferred embodiment, in which the components are stacked and can be readily disassembled. Indeed, the upstream guide die serves to press against the sleeve in the axial direction to ensure its remains properly seated within the housing 30.

Furthermore, in the embodiment of Fig. 6, both the bottom end of the sizing die 38 and the sleeve 63 must rest on a shoulder or flange within the coater so as to prevent their axial downward displacement. On the other hand, if the upper guide die were sized to fit within the sleeve at the top, it would tend to displace axially downward and block the feed holes 40, since there is no disclosed structure for stopping the guide die's axial displacement. Clearly, therefore, the asserted modification would not have been obvious or desirable. Rather, at most, one skilled in the art would take away from Kar et al. to place only the bottom sizing die within the sleeve.

For at least the foregoing reasons, Applicants respectfully submit that the independent claims are allowable over the applied art and kindly request the Examiner to reconsider and withdraw the rejections of these claims.

Claim 2 recites that “the entry die is disposed in a housing of the die-support whose diameter is greater than the inside diameter of the grid.” In rejecting claim 2, the grounds of rejection state:

With respect to claims 2, 5, 8, 15 and 18, Kar et al infers that if cavity or chamber is not formed in the housing, then the housing or alternatively, if not formed in the housing, in Figure 5 shows the ends of the sleeve or grid are provided with flanges to coact with walls of housing to form a flow chamber/annular chamber 53 through which coating is fed. Therefore, if one desires to use one of Kar et al coating applicators which do not have a flow chamber or annular chamber which is formed within the housing, it would have been obvious given the modifications of the Kar et al. sleeve with an upstream and downstream part to enlarge the upstream and downstream part for respectively the entry and exit die such that the upstream and downstream part has an outer diameter larger than outer diameter of the grid to enable one to form an annular flow chamber between the upstream and downstream part thus enabling one to insert the die support in die housing which does not have annual flow chamber formed in the housing for the taught advantages of an integral die support and grid-facilitate alignment of precise alignment of the longitudinal axes of the entry and exit die with the grid.

Office Action at page 4 (emphasis added).

The grounds of rejection clearly rely on the piecing together of multiple suppositions without pointing to any disclosure that would have guided the skilled artisan. Rather, when

taken as a whole, the disclosure in Kar et al. would have taught away from the alleged modification asserted by the Examiner.

Applicants and the Examiner are in agreement that none of the embodiments of Kar et al. discloses housing the die-support whose diameter is greater than the inside diameter of the grid, while also having the die-support and the grid as an integral one-piece-construction. In the embodiment of Fig. 2, the guide die is disposed in a bore of the housing 30 having a diameter larger than that of the flow distribution sleeve. On the other hand, the bore 32 is sized to match the outer flange diameter of the flow distribution sleeve 39 and the outer diameter of the sizing die 38. Given this structure and the disclosure of the alternative embodiment of Fig. 6, one skilled in the art would understand that the flow distribution sleeve 39 could be extended to accommodate the sizing die therein (as shown in Fig. 6). However, as noted above with respect to the independent claims, there is no disclosure for extending the upstream portion of the flow distribution sleeve to accommodate the guide die 42. Moreover, there is no disclosure for making the additional modification of expanding the inside diameter of the flow distribution sleeve at the upstream end so that its diameter is greater than that of the grid.

To the contrary, in all the embodiments, the flow distribution sleeve 39 has a uniform inside diameter, even in the embodiment of Fig. 6 in which the sizing die is placed within an extension of the sleeve. There is no disclosed rationale for incurring added manufacturing costs to expand the flow distribution sleeve at the upstream end, since this would defeat any alleged benefit of placing the guide die within the flow distribution sleeve. Rather, the modification

would entail costly re-manufacturing of a flow distribution sleeve that expands and presses against the inside face of the expanded bore 31 shown in Fig. 2. Such redundancy would serve no apparent purpose, and result in a complex and expensive structure.

As for the Examiner's motivational rationale based on the desire to form an annular flow chamber within the housing, Kar et al. discloses two alternative approaches, neither of which is described as being deficient in any way so as to motivate the skilled artisan to search for yet a third undisclosed approach. The first approach is to include an annular slot 50 in the housing 30 followed by a inner chamber defined by the bore 32 and the flanges 41 of the flow distribution sleeve. The second approach, as illustrated in Fig. 4, is to have an annular tapered cavity 56 and omit the flanges 41.

In essence, the Examiner' rationale for completely reconfiguring the structure of Kar et al. to obtain the claimed invention is based on Applicants' own disclosure, and not on any prior art disclosure. For this reason, Applicants kindly request the Examiner to reconsider the rejection of claim 2 in view of the rigorous standard required by the Federal Circuit for establishing obviousness, and allow the claim to issue.

Applicants traversal of claim 2 applies equally to claims 5, 8, 15, and 18, and, therefore, the Examiner is kindly requested to reconsider and withdraw the rejection of these claims as well.

With respect to claim 3, the grounds of rejection state:

Kar et al show in Fig. 6 that the radial face of the exit die is pressed against the radial wall of the die support. Therefore, it would have been obvious given the modification of the Kar et al apparatus as discussed above with an upstream part and entry die to fit the entry die into the die support in a manner similar to that exit or sizing die in the downstream part for the following obvious reasons - to expect similar end results to that of the exit die which is press-fit into downstream part and also for advantages of simplification in design.

Office Action at page 4. Applicants respectfully disagree.

Even if, one assumes for the sake of argument that it would have been obvious to extend the upstream portion of the flow distribution sleeve in Kar et al. and press-fit the guide die therein, the resulting modification would still not achieve the claimed invention. Claim 3 requires that the radial face of the entry die is pressed against a first radial wall of the die-support. In Fig. 6 of Kar et al., the outer circumferential surface of the die is pressed against the inner circumferential face of the extended portion of the flow distribution sleeve. Applicants' specification clearly show the radial wall 9 and radial face 10 as being transverse the axial direction of the housing and die.

Similarly, with respect to claim 6, the grounds of rejection state that "Kar et al shows in Fig. 6 the radial face of the exit die bears against the second radial wall of the die support." Office Action at page 4. Accordingly, Applicants comments above in support of claim 3 apply to this rejection as well.

Applicants are amending claims 3 and 6 to clarify what are already limitations of these claims. In view of the foregoing, the Examiner is kindly requested to reconsider and withdraw the rejection of claims 3 and 6.

Regarding claims 19-21, the grounds of rejection state:

it would have been obvious given the modification of the Kar et al apparatus with the integral grid and die support as discussed above that the upstream and downstream part and the grid are arranged within housing forms the relationships set forth in the claims since Kar et al discloses that grid must be spaced from wall of housing to form an annular space into which coating is provided through the holes of the grid and onto the optical fiber.

Office Action at page 4. Applicants disagree.

Claim 19 recites that “the upstream part includes a first radial wall and the downstream part includes a second radial wall, and wherein the first radial wall opposes the second radial wall to define an annular space around the grid.” Again, the Examiner can not point to any actual disclosure in Kar et al. that teaches the features recited in claim 19. Rather, the Examiner starts with Applicants’ invention, and then works backwards using Applicants’ disclosure as a road map to radically modify the structure of Kar et al.

Applicants are in agreement with the Examiner that Kar et al. discloses that the grid must be spaced from wall of housing to form an annular space into which coating is provided through the holes of the grid and onto the optical fiber. However, as Applicants stated above in support of claim 2, Kar et al. discloses alternative and complete structures for creating the annular space. There is absolutely no direction in Kar et al. for obtaining Applicants’ claimed structure, nor is

there any motivation for one skilled in the art to experiment in the direction of Applicants' invention.

In view of the foregoing, the Examiner is kindly requested to reconsider and withdraw the rejection of claims 3 and 6.

2. Claims 4 And 7 In View Of Guillemette, et al.

In rejecting claims 4 and 7 in view of Guillemette, et al., the grounds of rejection state that

Kar et al is applied for the reasons noted above. Kar et al fails to teach a hollow part screwed into the die support to press the entry and exit die against the respective radial wall die support. However, it would have been obvious to modify the Kar et al coating apparatus by providing a hollow part such as shown in Fig. 1 of Guillemette et al (un-numbered element on far left side of Fig. I of Guillemette et al) to press a die in a coating apparatus into contact with a wall of the die support for the obvious advantage facilitating maintenance on the coating apparatus.

Applicant's arguments filed January 9, 2003 have been fully considered but they are not persuasive.

Applicant's argument of the non-obviousness of making the Kar et al die support and grid integral is found to be non-persuasive. Although the Examiner agrees with applicant's argument of the non-obviousness of making the Kar et al die support and grid as shown in Figure 2 integral, Figure 6 of Kar et al clearly shows making a die support and grid integral. Kar et al fails to teach the integral die support and grid includes a die support for the entry die or upstream part. However, it would have been obvious to modify the Kar et al apparatus by extending sleeve 63 in a direction upstream of the grid or provide an upstream part to receive the entry die to facilitate alignment of the longitudinal axis of the guide die or entry die with the aligned longitudinal axis of the grid and exit die for obvious reason to expect similar

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benefits taught by Kar et al for making integral the grid and die support/downstream part/receiver for the exit die integral— facilitate maintenance by eliminating time spent for aligning the dies, both exit and entry, with the grid.

Office Action at pages 4 and 5.

Without substantively commenting on the Examiner's rejection of claims 4 and 7, Applicants submit that these claims are allowable at least by reason of their respective dependencies.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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CUSTOMER NUMBER

Date: July 22, 2003

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

Claim 3. (Amended) The device of claim 1, wherein a radial face of the entry die is pressed against a first radial wall of the die-support, and wherein the radial face of the entry die and the first radial wall are transverse to an axial direction of the entry die extending between the entry die and the exit die.

Claim 6. (Amended) The device of claim 5, wherein a radial face of the exit die bears against a second radial wall of the die-support, and wherein the radial face of the exit die and the second radial wall are transverse to an axial direction of the exit die extending between the entry die and the exit die.